

Part 3

Transportation

Standards for 1:24,000-Scale Digital Line Graphs-3 Core

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3. TRANSPORTATION:
ROADS AND TRAILS - MAJOR CODE 170
RAILROADS - MAJOR CODE 180
PIPELINES, TRANSMISSION LINES, AND MISCELLANEOUS TRANSPORTATION
FEATURES - MAJOR CODE 190

Transportation data are collected in three separate categories (Roads and Trails, Railroads, and Pipelines, Transmission Lines, and Miscellaneous Transportation Features) for each map source, which means that the attribute codes from the three categories are not intermingled. However, the three categories are distributed by the National Cartographic Data Base office as one unit. Where collection of transportation is authorized from a map source, all of the transportation from that source is collected. If there are no elements in a particular category on a source, the header record shows that the file was initialized to hold Roads and Trails, Railroads, or Pipelines, Transmission Lines, and Miscellaneous Transportation Features, but the neatlines of the source, the background area, and the area outside the map are the only information digitized for that category.

3.1 General Principles

The major/minor attribute code describing the element type will always be encoded in the first position. Generally, if further attributes are needed to describe an element, the ordering is not significant. An exception occurs in coding highway route numbers. If a highway is labeled BYP, ALT, or BR, for example, then the route number parameter code must be preceded by the appropriate descriptive code for bypass, alternate, or business. This is important because when multiple descriptive codes are required to describe a road, each descriptive code must be associated with the proper route number.

3.1.1 Node Attribute Codes

There are no node attribute codes.

3.1.2 Area Attribute Codes

The use of the common attribute codes for outside area and void area is discussed in Part 1: Data Description and Template Development. There are no other general principles that apply to the area attribute codes.

3.1.3 Line Attribute Codes

With the exception of the trail attribute code (170 0211), the road ferry crossing code (170 0214), and the general purpose code for a ramp in an interchange (170 0402), roads are always

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encoded in the first position with the DLG-3 Core road attribute code (170 0200). Roads are always digitized as a centerline. Some depictions of roads can indicate minor changes in road width or shape. This occurs most often in suburban developments where stub roads, decorative plantings, partial cul-de-sacs, and other "bumps" in the roads have been symbolized and the road casings deviate from parallel lines. This also commonly occurs with road "flares" at road junctions. Small parking areas or pull-off areas have also been symbolized. This level of detail should be ignored when collecting the centerline. Changes in road width and shape are not collected.

Every railroad is encoded in the first position with a code that identifies the type of railroad. Mainline tracks, rapid transits, and sidings or spurs are encoded as railroads (180 0201). The other types of railroads that are collected are carlines, including light rails on which trolley or cable cars run (180 0204); special purpose railroads, such as cog railroads, incline railways, or logging trams (180 0205); railroad ferry crossings (180 0207); and railroad yards (area code 180 0209). The operational status, gauge, number of tracks, elevation, and ownership of railroads are not collected.

Transmission lines and pipelines are not collected. There are no general principles that apply to line attribute codes for miscellaneous transportation features.

3.1.4 Single-Point (Degenerate Line) Attribute Codes

There are no single-point attribute codes.

3.1.5 General Purpose Attribute Codes

There are no general principles that apply to the road general purpose code (ramp in interchange).

There are no general purpose codes for railroads.

Complexes and buildings that are associated with transmission lines and pipelines are not collected. There are no general principles that apply to the general purpose codes for miscellaneous transportation features.

3.1.6 Descriptive Attribute Codes

In all cases, descriptive codes must be used with a primary attribute code, either from the list of line attribute codes, area attribute codes, or general purpose attribute codes.

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The road code is followed by the appropriate DLG-3 Core descriptive codes, which distinguish between the road classes. Roads are classified using information provided by the States in cooperation with local officials; classifications are based on the National Highway System (NHS) functional scheme developed by the U.S. Department of Transportation (DOT) and the Federal Highway Administration (FHA).

Roads, trails, or railroads that underpass other elements, including other roads, trails, railroads, and runways, are collected using the attribute codes for underpassing (170 0607 for roads and trails, 180 0605 for railroads). An attribute code is applied to the part of a road, trail, or railroad that passes through a tunnel (170 0601 for roads and trails, 180 0601 for railroads) or overpasses another transportation element on a bridge (170 0602 for roads and trails, 180 0602 for railroads). Roads, trails, or railroads that pass through snowsheds are collected continuously, as though the snowshed were not there, and are given all appropriate attribute codes.

All roads are shown with the standard width symbol, and therefore do not require measurement or the application of a descriptive code for road width.

There are no descriptive attribute codes for miscellaneous transportation features.

3.1.7 Parameter Attribute Codes

When unrevised collection is done from a graphic only, the parameter codes for photorevised elements are applied to elements shown in purple on the published source map (170 0000 for roads and trails, 180 0000 for railroads, and 190 0000 for miscellaneous transportation features). The use of the common attribute codes for photorevised elements is discussed in Part 1: Data Description and Template Development.

Assigning route numbers to road segments involves interpreting the placement of the route shields on the source map. This is not always a straightforward task. Although the route shields were originally placed on the map to provide clear indications of the extent of the numbered route, because of various State requirements for numbering the roads, it can be difficult to determine whether route numbers are continuous or when a road has multiple route numbers, particularly where multiple numbered routes join and split. In general, on any given map, interstate and U.S. numbered highways will be continuous and every effort should be made to identify each segment of the road with the appropriate route number. (Interstate and U.S. numbered highways are not necessarily continuous across the entire country or even an entire State, though.) State and county route numbers, however, are not necessarily continuous, and this varies by State. If a numbered route joins another numbered route and both route numbers are shown next to the segment of road, assign both route numbers to the segment of road. If, however, a numbered route joins another numbered route and only one route number is shown next to the segment of road, assume the segment carries only the one route number and assign

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only one route number. If the numbered route that was dropped when it joined the other numbered route reappears after splitting from the other numbered route, allow the route to be discontinuous.

The entity responsible for roads varies by State; use the following information in determining whether a route number is a State or county route.

County route numbers have only been shown on maps in Florida, Missouri, and Wisconsin. In Missouri and Wisconsin, if a route number is symbolized with the State route shield (a circle) and it contains an alphabetic designator, it is collected with a county route number (176 ----). In Florida, county route numbers are no longer required and are not collected in the DLG, even though they are shown on the source map. (County route numbers in Florida have been shown with a rectangular route shield.)

In Texas, farm-to-market roads have been shown with the State route shield (although it becomes an ellipse instead of a circle because the route number is generally four digits). These route numbers are collected with (174 ----), State route number.

All other route numbers symbolized with the State route shield are collected using the State route number (174 ----). Note that if the State route number is four digits, the State route shield will be elliptical, rather than circular.

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3.1.8 List of Roads and Trails Attribute Codes

o Node Attribute Codes

There are no node attribute codes.

o Area Attribute Codes

000 0000 Outside Area

170 0100 Void Area

o Line Attribute Codes

170 0200 Road

170 0211 Trail

170 0214 Road Ferry Crossing

o Single-Point (Degenerate Line) Attribute Codes

There are no single-point attribute codes.

o General Purpose Attribute Codes

170 0402 Ramp in Interchange

o Descriptive Attribute Codes

170 0601 In Tunnel

170 0602 Overpassing, On Bridge

170 0607 Underpassing

170 0615 Bypass

170 0616 Alternate

170 0617 Business

170 0619 Spur

170 0620 Loop

170 0621 Connector

170 0622 Truck Route

170 0630 Rural Interstate

170 0631 Rural Principal Arterial

170 0632 Rural Minor Arterial

170 0633 Rural Major Collector

170 0634 Rural Minor Collector

170 0635 Rural Local

170 0636 Urban Interstate

170 0637 Urban Freeway or Expressway

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170 0638 Urban Principal Arterial
170 0639 Urban Minor Arterial
170 0640 Urban Collector
170 0641 Urban Local
170 0642 Not Classified

o Parameter Attribute Codes

170 0000 Photorevised Feature
172 ---- Interstate Route Number
173 ---- U.S. Route Number
174 ---- State Route Number
176 ---- County Route Number
177 XXYY Alphabetic Portion of Any Route Number

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3.1.9 List of Railroads Attribute Codes

o Node Attribute Codes

There are no node attribute codes.

o Area Attribute Codes

000 0000 Outside Area

180 0100 Void Area

o Line Attribute Codes

180 0201 Railroad

180 0204 Carline

180 0205 Cog Railroad, Incline Railway, or Logging Tram

180 0207 Railroad Ferry Crossing

180 0209 Railroad Yard

o Single-Point (Degenerate Line) Attribute Codes

There are no single-point attribute codes.

o General Purpose Attribute Codes

There are no general purpose attribute codes.

o Descriptive Attribute Codes

180 0601 In Tunnel

180 0602 Overpassing, On Bridge

180 0605 Underpassing

180 0610 Rapid Transit

o Parameter Attribute Codes

180 0000 Photorevised Feature

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3.1.10 List of Pipelines, Transmission Lines, and Miscellaneous Transportation Features Attribute Codes

o Node Attribute Codes

There are no node attribute codes.

o Area Attribute Codes

000 0000 Outside Area

190 0100 Void Area

o Line Attribute Codes

There are no line attribute codes.

o Single-Point (Degenerate Line) Attribute Codes

There are no single-point attribute codes.

o General Purpose Attribute Codes

190 0403 Landing Strip, Runway, Apron, Taxiway

190 0404 Helipad

o Descriptive Attribute Codes

There are no descriptive attribute codes.

o Parameter Attribute Codes

190 0000 Photorevised Feature

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3.2 Attribute Coding

This section contains the DLG-3 Core transportation attribute coding descriptions. They are listed in alphabetical order, according to the DLG-3 Core elements for which they apply.

180 0204 Carline

This code identifies a set of parallel light rails on which trolleys or cable cars run.

DELINEATION

The limit of a Carline is the extent of the rails.

DATA EXTRACTION

Capture Conditions

- Size

If a Carline is $\geq 2.64''$ (1.0 mile) in length,
Then capture.

Attribute Information

The following relationship descriptive codes are used with the element attribute code for a Carline:

180 0601 In Tunnel. The part of a Carline that is in a tunnel.

180 0602 Overpassing, On Bridge. The part of a Carline that is on a bridge. When a Carline on a bridge passes under a Road or Railroad, it is necessary to collect both Overpassing, On Bridge and Underpassing. See code 180 0605.

180 0605 Underpassing. The part of a Carline that passes under, rather than intersects, another hydrography or transportation element. Digitize a line connecting the part of the Carline that would be dropped on a graphic and apply this code. When a Carline on a bridge passes under a Road or Railroad, it is necessary to collect both Underpassing and Overpassing, On Bridge. See code 180 0602. Do not capture Underpassing on a Carline if In Tunnel is captured, because the relationship between the Carline and the other element is implied.

Representation Conditions

A Carline is always represented as a line.

Source Interpretation Guidelines

All

If a Carline coincides with a Road, and both elements meet the capture conditions,
Then capture both the Carline and Road.

Graphic

Capture the Overpassing, On Bridge code for all instances where bridge ticks are shown on a Carline.

Revision

Do not revise. Retain existing elements.

Do not capture a new railroad as a Carline. Collect as a Railroad, if the capture conditions are met.

180 0205 Cog Railroad, Incline Railway, or Logging Tram

This code identifies a set of parallel light rails used for special purpose railroads to go up steep slopes.

DELINEATION

The limit of a Cog Railroad, Incline Railway, or Logging Tram is the extent of the rails.

DATA EXTRACTION

Capture Conditions

- Size

If a Cog Railroad, Incline Railway, or Logging Tram is $\geq 2.64''$ (1.0 mile) in length,
Then capture.

Attribute Information

The following relationship descriptive codes are used with the element attribute code for a Cog Railroad, Incline Railway, or Logging Tram:

180 0601 In Tunnel. The part of a Cog Railroad, Incline Railway, or Logging Tram that is in a tunnel.

180 0602 Overpassing, On Bridge. The part of a Cog Railroad, Incline Railway, or Logging Tram that is on a bridge. When a Cog Railroad, Incline Railway, or Logging Tram on a bridge passes under a Road or Railroad, it is necessary to collect both Overpassing, On Bridge and Underpassing. See code 180 0605.

180 0605 Underpassing. The part of a Cog Railroad, Incline Railway, or Logging Tram that passes under, rather than intersects, another hydrography or transportation element. Digitize a line connecting the part of the Cog Railroad, Incline Railway, or Logging Tram that would be dropped on a graphic and apply this code. When a Cog Railroad, Incline Railway, or Logging Tram on a bridge passes under a Road or Railroad, it is necessary to collect both Underpassing and Overpassing, On Bridge. See code 180 0602. Do not capture Underpassing on a Cog Railroad, Incline Railway, or Logging Tram if In Tunnel is captured, because the relationship between the Cog Railroad, Incline Railway, or Logging Tram and the other element is implied.

Representation Conditions

A Cog Railroad, Incline Railway, or Logging Tram is always represented as a line.

Source Interpretation Guidelines

All

If a Cog Railroad, Incline Railway, or Logging Tram coincides with a Road and both elements meet the capture conditions,
Then capture both the Cog Railroad, Incline Railway, or Logging Tram and the Road.

Graphic

The tracks must be labeled on the graphic in order for a Cog Railroad, Incline Railway, or Logging Tram to be collected.

Capture the Overpassing, On Bridge code for all instances where bridge ticks are shown on a Cog Railroad, Incline Railway, or Logging Tram.

Revision

Do not revise. Retain existing elements.

Do not capture a new railroad as a Cog Railroad, Incline Railway, or Logging Tram. Collect as a Railroad, if the capture conditions are met.

190 0404 Helipad

This code identifies a structure used for the landing and takeoff of helicopters.

DELINEATION

The limit of a Helipad is the extent of the structure.

DATA EXTRACTION

Capture Conditions

- Relationship to other elements

If a Helipad is not on a building and is not part of a Landing Strip, Runway, Apron, or Taxiway, Then capture.

Attribute Information

N/A

Representation Conditions

If a Helipad is $< 0.04''$ (80 ft) along the longest axis,
Then represent the Helipad as a degenerate line.

If a Helipad is $\geq 0.04''$ (80 ft) along the longest axis,
Then represent the Helipad as an area.

Source Interpretation Guidelines

All

If a Helipad is represented as an area, the perimeter of the area is collected as an unattributed line.

Helispots, which are unimproved clearings or marked clearings on the ground, are not captured as Helipads.

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Helipad

Graphic

N/A

Revision

N/A

190 0403 Landing Strip, Runway, Apron, Taxiway

This code identifies an area on land used by aircraft for takeoff, landing, parking, or access to runways.

DELINEATION

The limit of a Landing Strip, Runway, Apron, Taxiway is the extent of the area used by aircraft for landing or takeoff, for access to runways, or for parking.

DATA EXTRACTION

Capture Conditions

- Construction/composition
- Status

If a Landing Strip, Runway, Apron, Taxiway surface is paved,

Or

If a Landing Strip or Runway surface is not paved and is permanent,

Then capture.

Attribute Information

N/A

Representation Conditions

If a Landing Strip, Runway, Apron, Taxiway is isolated, and is $< 0.02''$ (40 ft) along the shortest axis,
Then represent the Landing Strip, Runway, Apron, Taxiway as a line.

If a Landing Strip, Runway, Apron, Taxiway is isolated, and is $\geq 0.02''$ (40 ft) along the shortest axis,
Then represent the Landing Strip, Runway, Apron, Taxiway as an area.

If a Landing Strip, Runway, Apron, Taxiway consists of more than an isolated runway,

Then represent the Landing Strip, Runway, Apron, Taxiway as an area.

Source Interpretation Guidelines

All

If a Landing Strip, Runway, Apron, Taxiway is represented as an area, the area perimeter is collected as an unattributed line.

Do not capture seaplane landing areas.

Do not capture seaplane ramps.

Graphic

Generally, only paved aprons and taxiways are shown on 1:24,000-scale maps.

On 1:24,000-scale maps made before the middle of the 1980's, and starting again in 1994, landing strips, runways, aprons, and taxiways are generally outlined with a black line. The black line is solid if the landing strip or runway is paved, and the black line is dashed if the landing strip or runway is unpaved.

On 1:24,000-scale maps made from the middle of the 1980's to 1994, the areas covering runways and paved landing strips are symbolized with a screened black line, and the outlines of aprons and taxiways are shown with a solid black line. Unpaved landing strips are shown with a dashed black line.

Revision

N/A

180 0201 Railroad

These codes identify a set of parallel rails on which a train runs.

DELINEATION

The limit of a Railroad is the extent of the rails.

DATA EXTRACTION

Capture Conditions

- Type/category of element
- Relationship to surface
- Size
- Location
- Relationship to other elements

If a Railroad is a mainline track that provides a direct route through an area,

Or

If a Railroad is an urban or suburban transit railway and is aboveground,

Or

If a Railroad is a siding or spur, is outside of a Railroad Yard, $\geq 2.64''$ (1.0 mile) in length, and diverges a distance $\geq 0.5''$ (1,000 ft) from the primary track,

Or

If a Railroad is a siding or spur and is the limit of a Railroad Yard,
Then capture.

Attribute Information

The following relationship descriptive codes are used with the element attribute code for a Railroad:

180 0601 In Tunnel. The part of a Railroad that is in a tunnel.

180 0602 Overpassing, On Bridge. The part of a Railroad that is on a bridge. When a Railroad on a bridge passes under another Road or Railroad, it is necessary to collect both Overpassing, On Bridge and Underpassing. See code 180 0605.

180 0605 Underpassing. The part of a Railroad that passes under, rather than intersects, another hydrography or transportation element. Digitize a line connecting the part of the Railroad that would be dropped on a graphic and apply this code. When a Railroad on a bridge passes under another Road

or Railroad, it is necessary to collect both Underpassing and Overpassing, On Bridge. See code 180 0602. Do not capture Underpassing on a Railroad if In Tunnel is captured, because the relationship between the Railroad and the other element is implied.

180 0610 Rapid Transit. An urban or suburban railway that is used for fast passenger transportation. Do not apply this code to newly added railroads.

Representation Conditions

A Railroad is always represented as a line.

Source Interpretation Guidelines

All

If there are two or more primary tracks on the same roadbed,
Then capture only one instance of a Railroad, down the centerline of the roadbed.

Do not capture aerial tramways, miniature/amusement park railways, or monorails.

If a Railroad coincides with a Road, and both elements meet the capture conditions,
Then capture both the Railroad and Road.

If a Railroad coincides with the perimeter of a Railroad Yard,
Then do not displace the Railroad.

Graphic

Capture the Overpassing, On Bridge code for all instances where bridge ticks are shown on a Railroad.

Do not apply the Rapid Transit descriptive code to a railroad unless it is labeled on the graphic.

If a trail symbol is labeled "Old Railroad Grade,"
Then capture it as a Trail, if the capture conditions are met. Do not capture it as a Railroad.

Revision

Capture the Overpassing, On Bridge code for all Railroads on bridges \geq 240 feet long, as well as all Railroads on covered bridges.

Do not capture old railroad grades as Railroads. Capture them as Trails, if the capture conditions are met.

Do not apply the Rapid Transit descriptive code to newly added railroads.

180 0207 Railroad Ferry Crossing

This code identifies a route used to transport railroad cars between two points separated by water.

DELINEATION

The limit of Railroad Ferry Crossing is the extent of the area designated for the purpose of transporting railroad cars.

DATA EXTRACTION

Capture Conditions

- Relationship to other elements

If a Railroad Ferry Crossing connects Railroads that meet capture conditions,
Then capture.

Attribute Information

N/A

Representation Conditions

A Railroad Ferry Crossing is always represented as a line.

Source Interpretation Guidelines

All

N/A

Graphic

Capture all.

Revision

Do not revise. Retain existing elements.

180 0209 Railroad Yard

This code identifies an area provided with a system of tracks and associated structures where railway trains are assembled and railway cars are switched, stored, or serviced.

DELINEATION

The limit of a Railroad Yard is the point at which multiple sidings diverge from the mainline track at one end of Railroad Yard to the point at which multiple sidings converge on a mainline track or terminate at the other end of Railroad Yard and the outermost tracks.

DATA EXTRACTION

Capture Conditions

- Number of tracks

If a Railroad Yard contains six or more adjacent tracks, including sidings and mainline tracks,
Then capture.

Attribute Information

The following relationship descriptive code is used with the element attribute code for a Railroad Yard:

180 0605 Underpassing. The part of a Railroad Yard that passes under, rather than intersects, another element. Digitize an unattributed line along the perimeter of the part of the Railroad Yard that would be dropped on a graphic and apply this code.

Representation Conditions

A Railroad Yard is always represented as an area.

Source Interpretation Guidelines

All

The perimeter of a Railroad Yard that is not collected as a Railroad is collected as an unattributed line.

Railroad Yards are collected to scale with the mainline track through the yard and the outermost tracks that form the perimeter shown in true position.

Sidings or spurs that form the limit of a Railroad Yard are collected as Railroads. Sidings or spurs within Railroad Yards that do not form the limits of Railroad Yards are not collected.

Areas within a Railroad Yard that are not covered by tracks are captured as part of the Railroad Yard.

Graphic

N/A

Revision

N/A

170 0402 Ramp in Interchange

This code identifies a road that connects two or more roads that cross at different levels.

DELINEATION

The limit of a Ramp in Interchange is the extent of the roads that connect two or more roads that are grade-separated in an interchange.

DATA EXTRACTION

Capture Conditions

- Relationship to a highway system

If a Ramp in Interchange is part of an Interstate, U.S., or State highway system,
Then capture.

Attribute Information

See Road for associated descriptive and parameter attribute codes.

Representative Conditions

A Ramp in Interchange is always collected as a line.

Source Interpretation Guidelines

All

Connecting roadways between two roads that are at the same grade, such as turning roadways, are not collected as Ramp in Interchange. See Road.

A Ramp in Interchange generally does not carry a functional road class or carry a route number, except in the few cases where a ramp forms the only connection between segments of a numbered route.

Graphic

Capture the Overpassing, On Bridge code for all instances where bridge ticks are shown on a Ramp in Interchange.

Revision

Capture the Overpassing, On Bridge code for all Ramps in Interchanges on bridges \geq 240 feet long.

170 0200 Road

This code identifies an open way for the passage of vehicles.

DELINEATION

The limit of a Road is the extent of the passage surface, excluding shoulders and curbs.

DATA EXTRACTION

Capture Conditions

- Type/category of element
- Size

If a Road is a public road,

Or

If a Road is a private road, is in a rural area, is $\geq 0.5''$ (1,000 ft) along the longest axis, and leads to a housing unit or connects two public roads,

Or

If a Road is a private road, is in an urban area, is $\geq 0.25''$ (500 ft) along the longest axis, and leads to a housing unit or connects two public roads,

Then capture.

Attribute Information

Roads are classified using information provided by the States in cooperation with local officials; classification is based on the National Highway System (NHS) functional scheme developed by the U.S. Department of Transportation (DOT) and the Federal Highway Administration (FHA). This functional scheme groups roads and streets into three basic categories; arterial, collector, and local. The basic principle in classifying highways is that roads serve two functions or purposes: moving traffic and providing access to adjacent land use. Although most roads serve both functions, classification is determined by the degree to which one function dominates. Arterial roads carry traffic quickly from one place to another over long distances. Collector roads funnel traffic from local roads to arterial roads. Local roads provide the most local land access. Rural and urban areas have fundamentally different characteristics as to the density and types of land use, the density of street and highway networks, the nature of travel patterns, and the way in which these factors are related in the definitions of highway function. The rural functional system consists of Interstate highways and other principal arterials, minor arterials, major and minor collectors, and local roads. The urban functional system consists of Interstate highways, freeways or expressways, other principal arterials, minor arterials, collectors, and local roads. For a more thorough description of the functional road classification scheme, see "Highway Functional Classification, Concepts, Criteria, and Procedures," Federal Highway Administration, March, 1989.

The following functional descriptive attribute codes are used with the attribute element code for a Road. The chart that follows is intended to further illustrate the relationship between the codes and the road classes in the NHS functional road scheme:

- 170 0630 Rural Interstate
- 170 0631 Rural Principal Arterial
- 170 0632 Rural Minor Arterial
- 170 0633 Rural Major Collector
- 170 0634 Rural Minor Collector
- 170 0635 Rural Local
- 170 0636 Urban Interstate
- 170 0637 Urban Freeway or Expressway
- 170 0638 Urban Principal Arterial
- 170 0639 Urban Minor Arterial
- 170 0640 Urban Collector
- 170 0641 Urban Local
- 170 0642 Not Classified

Functional Class	Subclass	Rural	Urban
Arterial	Interstate	170 0630	170 0636
	Expressway or Freeway		170 0637
	Principal	170 0631	170 0638
	Minor	170 0632	170 0639
Collector	Major	170 0633	
	Minor	170 0634	
			170 0640
Local		170 0635	170 0641
Not Classified		170 0642	

The following route descriptive attribute codes are used when there is a designated path through the road network. They can be used with the attribute code for a Road or the descriptive attribute code for the NHS functional road class, and they precede the parameter code that contains the route number(s) or letter(s):

170 0615 Bypass Route. A Road that is identified as a bypass route by the presence of the letters **BYP** in the highway route marker.

170 0616 Alternate. A Road that is identified as an alternate route by the presence of the letters **ALT** in the highway route marker.

170 0617 Business. A Road that is identified as a business route by the presence of the letters **BR** in the highway route marker.

170 0619 Spur. A Road that is described as a spur route by the presence of the word **SPUR** in the highway route marker.

170 0620 Loop. A Road that is described as a loop route by the presence of the word **LOOP** in the highway route marker.

170 0621 Connector. A Road that is described as a connector route by the presence of the abbreviation **CONN** in the highway route marker.

170 0622 Truck Route. A Road that is described as a truck route by the presence of the abbreviation **TR** in the highway route marker.

The following parameter attribute codes are used to encode route number and letter designators. They are used with the attribute code for a Road and with the descriptive attribute code for the NHS functional road class, and they follow the route descriptive attribute code (if collected). Enter the number shown on the highway route marker in the spaces, flush right, one to four digits. If the route marker contains alphabetic characters, also use code 177 **XXYY**.

172 ____ Interstate Route Number. This code is used to encode the route number of an interstate highway. Do not encode the uppercase **I** that is sometimes associated with an interstate highway, because this parameter code imparts that information.

173 ____ U.S. Route Number. This code is used to encode the route number of a U.S. numbered highway. Do not encode the uppercase **US** that is sometimes associated with a U.S. highway, because this parameter code imparts that information.

174 ____ State Route Number. This code is used to encode the route number of a State highway. Do not encode the uppercase **S** or **SR** that is sometimes associated with a State highway, because this parameter code imparts that information. Route numbers are also encoded for selected State secondary highways in Kentucky, North Carolina, South Carolina, Texas, and Virginia if the highway is more than 1 mile in length, if the highway connects other State secondary highways longer than 1 mile, or if the highway goes to some prominent element. As a rule, State secondary route numbers are not encoded for roads contained entirely within urban areas.

176 ____ County Route Number. This code is used to encode a county route number when shown on a Missouri or Wisconsin map.

177 XXYY Alphabetic Portion of Any Route Number. This code is used to encode the alphabetic portion of any route number, by substituting numeric values for the alphabetic characters as follows:

00 = Blank, 01 = A, 02 = B, 03 = C, 04 = D, 05 = E, 06 = F, 07 = G, 08 = H, 09 = I, 10 = J, 11 = K, 12 = L, 13 = M, 14 = N, 15 = O, 16 = P, 17 = Q, 18 = R, 19 = S, 20 = T, 21 = U, 22 = V, 23 = W, 24 = X, 25 = Y, 26 = Z.

If one letter is encoded, it is entered in the YY part of the code, with blank coded in the XX part. This code is used with the appropriate route number parameter code, if the route designation is mixed numeric and alphabetic; the 177 XXYY code precedes or follows the code for the route number in accordance with its actual position in the route designator. In the case of an entirely alphabetic route designator, also use the appropriate route number parameter code with 0000 entered into the minor code. Do not use the 177 XXYY code to represent ALT, BR, BYP, I (interstate), SR (State route), US (United States), SPUR, LOOP, CONN (connector), or TR (truck route), as these qualifiers of the route number are encoded by other codes.

The following examples illustrate the use of this parameter code:

State route B143 is encoded 177 0002, 174 0143
County route 6R is encoded 176 0006, 177 0018
U.S. route A1A is encoded 177 0001, 173 0001, 177 0001
State route KK is encoded 177 1111, 174 0000
U.S. route ALT 1 is encoded 170 0616, 173 0001

The following descriptive attribute codes can be used with the attribute code for a Road, the descriptive attribute code for the NHS functional road class, and the route descriptive attribute code (if collected), and they can follow the route number and letter parameter attribute codes (if collected):

170 0601 In Tunnel. The part of a Road that is in a tunnel.

170 0602 Overpassing, On Bridge. The part of a Road that is on a bridge. When a Road on a bridge passes under another Road or Railroad, it is necessary to collect both Overpassing, On Bridge and Underpassing. See code 170 0607.

170 0607 Underpassing. The part of a Road that passes under, rather than intersects, another hydrography or transportation element. Digitize a line connecting the part of the Road or Trail that would be dropped on a graphic and apply this code. When a Road on a bridge passes under another Road or Railroad, it is necessary to collect both Underpassing and Overpassing, On Bridge. See code 170 0602. Do not capture Underpassing on Road if In Tunnel is captured, because the relationship between the Road and the other element is implied.

Representation Conditions

A Road is always represented as a line.

Source Interpretation Guidelines

All

If the overall width of a Road is $\geq 0.05''$ (100 ft) and there is a median that is $\geq 0.01''$ (20 ft),
Then the Road is collected as two instances of Roads.

If the overall width of a Road is $\geq 0.05''$ (100 ft) and there is a median that is $< 0.01''$ (20 ft),
Then the Road is collected as one instance of a Road.

If the overall width of a Road is $< 0.05''$ (100 ft),
Then the Road is collected as one instance of a Road, regardless of whether there is a median.

A road under construction can be captured as a Road if it meets capture conditions and is advanced far enough in construction that the position and configuration are established and can be determined by signature (scar) on source images, and (or) it can be confirmed by State Highway Department detailed plans and profiles.

Roads not classified in the information provided by the States will be assigned the 170 0642 functional descriptive code for Not Classified. Do not attempt any further investigation.

Four-wheel drive trails are captured as Roads, if the capture conditions are met.

If a Road coincides with a Railroad, and both elements meet capture conditions,
Then capture both the Road and the Railroad.

If a cul-de-sac in a Road is large enough to have an interior island, digitize a centerline along the road in the cul-de-sac and code it as appropriate for the road class. If a cul-de-sac is not large enough to have an interior island, collect the Road to the far end of the cul-de-sac.

If a service facility, rest area, viewpoint, traffic circle, or weigh station is large enough that the access road that continues through it forms an interior island, digitize a centerline along the road and code it as appropriate for the road class. If a service facility, rest area, viewpoint, traffic circle, or weigh station is not large enough to have an interior island, do not collect the access road in it.

Graphic

Capture the Overpassing, On Bridge code for all instances where bridge ticks are shown on a Road.

Do not encode county route numbers in Florida. County route markers were shown on maps of Florida until 1992, at which time the practice was discontinued.

Revision

Capture the Overpassing, On Bridge code for all Roads on bridges ≥ 240 feet long, as well as for all Roads on covered bridges.

Use the NHS functional scheme information provided by the States to determine the road classification. Do not attempt any further investigation or research. New Roads not included in the information provided by the States will be assigned the 170 0642 functional descriptive code for Not Classified.

170 0214 Road Ferry Crossing

This code identifies a route used to transport vehicle traffic between two points separated by water.

DELINEATION

The limit of Road Ferry Crossing is the extent of the area designated for the purpose of transporting vehicle traffic.

DATA EXTRACTION

Capture Conditions

- Relationship to other elements

If a Road Ferry Crossing connects Roads that meet capture conditions,
Then capture.

Attribute Information

N/A

Representation Conditions

A Road Ferry Crossing is always represented as a line.

Source Interpretation Guidelines

All

N/A

Graphic

Capture all.

Revision

Do not revise. Retain existing elements.

170 0211 Trail

This code identifies a cleared path, beaten track, or improved surface, as through woods or wilderness, not usually trafficked by vehicles because of width, seasonal conditions, or access restrictions.

DELINEATION

The limit of a Trail is the extent of the traveled path.

DATA EXTRACTION

Capture Conditions

- Size
- Status
- Relationship to other elements

If a Trail is maintained for public use and is ≥ 1.0 " (2,000 ft) along the longest axis,

Or

If a Trail is used for portage and is ≥ 0.25 " (500 ft) along the longest axis,

Or

If a Trail is the only connection between two Trails, two Roads, or a Road and a Trail,

Or

If a Trail is the only access to a collected element and is ≥ 0.25 " (500 ft) along the longest axis,

Then capture.

Attribute Information

The following relationship descriptive codes are used with the element attribute code for a Trail:

170 0601 In Tunnel. The part of a Trail that is in a tunnel.

170 0602 Overpassing, On Bridge. The part of a Trail that is on a bridge. When a Trail on a bridge passes under another Road or Railroad, it is necessary to collect both Overpassing, On Bridge and Underpassing. See code 170 0607.

170 0607 Underpassing. The part of a Trail that passes under, rather than intersects, another hydrography or transportation element. Digitize a line connecting the part of the Trail that would be dropped on a graphic and apply this code. When a Trail on a bridge passes under another Road or Railroad, it is necessary to collect both Underpassing and Overpassing, On Bridge. See code 170 0602. Do not capture Underpassing on a Trail if In Tunnel is captured, because the relationship between the Trail and the other element is implied.

Representation Conditions

A Trail is always represented as a line.

Source Interpretation Guidelines

All

Do not capture four-wheel drive roads as Trails. Collect as Road, if the capture conditions are met.

Graphic

Capture the Overpassing, On Bridge code for all instances where bridge ticks are shown on a Trail.

If a trail symbol is labeled "Old Railroad Grade" and meets the capture conditions for a Trail,
Then capture it as a Trail.

Do not capture trails labeled "Approximate."

Do not capture those historical trails that do not meet the definition and capture conditions for a Trail.

Revision

Do not revise. Retain existing elements.